

AGL-Fuego display change flow

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Japan Technical Jamboree 60

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- Song Cai (cais.fnst@cn.fujitsu.com)
- Linux Software Engineer (2014 ~)
- AGL (2016 ~)
 - engaging on CIAT for AGL
 - especially AGL-Fuego(also named AGL-JTA)

- What is AGL-Fuego
- How to use AGL-Fuego
- Introduce about CIAT.display
- Change html display flow
- Future work

- automated test framework for AGL's LTSI
- based on Fuego
 - formerly called JTA
 - a Jenkins front-end and a host/target script engine
 - official automated test framework for LTSI project
- features
 - job triggers
 - source code management & image build & image deploy
 - tests executing & results publication
- advantages
 - highly customizable
 - flexible test configuration & running tests in batches
 - easy & flexible board setup

- add test case view
- add test case
- execute test on target board
- display result

How to use AGL-Fuego

➤ add test case view

dashboard-view-plugin required

Name: 17CY.CIAT

Description: [Empty text area]

[Raw HTML] [Preview](#)

Filter build queue: ☐

Filter build executors: ☐

Job Filters

Status Filter: All selected jobs

Recurse in subfolders: ☐

Jobs:

- ☐ MW.libsndfile1
- ☐ MW.libsoup-2.4
- ☐ MW.libsqlite3-0
- ☐ MW.libssl1.0.0
- ☐ MW.libstdc++6
- ☐ MW.libtheora
- ☐ MW.libtiff5
- ☐ MW.libtinfo5
- ☐ MW.libudev0
- ☐ MW.libusb-1.0-0
- ☐ MW.libuuid1
- ☐ MW.libv4l2subdev0
- ☐ MW.libvorbis

☒ Use a regular expression to include jobs into the view

Regular expression: 17CY_CIAT.*

➤ add test case

- test script (backend)
- job configuration (frontend)
- configuration of target board [optional]
- test spec & test plan [optional]

reference

- docs/jta-docs.pdf
- docs/How-to-Add-Test-Cases-on-JTA.pdf
- docs/How-to-Configure-CIAT-on-AGL-JTA.pdf

How to use AGL-Fuego

- Back to Dashboard
- Status
- Changes
- Workspace
- Build with Parameters**
- Delete Project
- Configure
- Rebuild Last
- Test Results Analyzer

Project Functional.bzip2

This build requires parameters:

Device
(target)

Reboot ☐

If checked target device will be rebooted before running test.

Rebuild ☐

If checked all existing build instances of the test suite will be deleted and test suite will be rebuilt from tarball.

Target_Cleanup ☒

TESTPLAN

Build

- Back to Dashboard
- Status
- Changes
- Workspace
- Build with Parameters
- Delete Project
- Configure
- Rebuild Last
- Test Results Analyzer

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Project Functional.bzip2

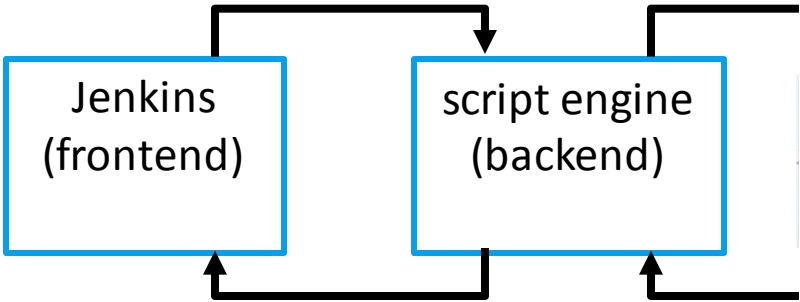
Bzip2 built-in function test suite

- Workspace
- Recent Changes

Permalinks

- Last build (#15), 75 ms ago
- Last stable build (#14), 1 day 19 hr ago
- Last successful build (#14), 1 day 19 hr ago
- Last failed build (#6), 14 days ago
- Last unsuccessful build (#10), 10 days ago
- Last completed build (#14), 1 day 19 hr ago

Build History		trend
find		
#15	2017-3-13 下午3:08	
#14	2017-3-11 下午8:06	



return result

return

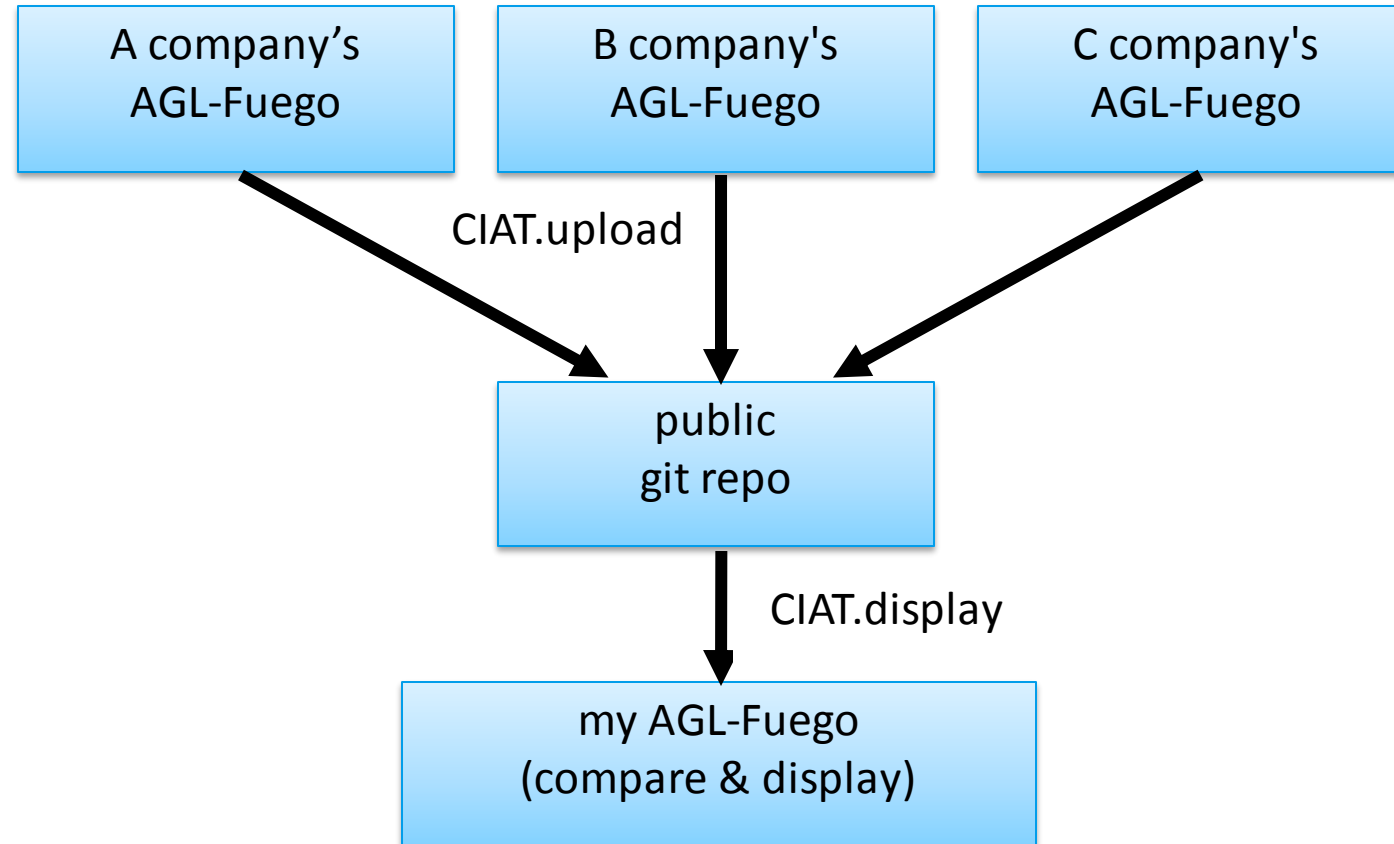
➤ display result

Functional.bzip2 Test Result

- Latest Total: 11
- Latest Pass: 11
- Latest Fail: 0
- Latest Untest: 0

No.	Functional.bzip2	2017-03-13 07:08:51
		Start time: 2017-03-13 07:08:51
		End time: 2017-03-13 07:08:59
		Board version: koelsch
		Test dir: /var/backups/aaa/jta.Functional.bzip2
		Test Device: /dev/mmcblk0p2
		Filesystem for Test Device: ext2
		Command line: sh -v run-tests.sh 2>&1
		Result
1	TEST-1	PASS
2	TEST-2	PASS
3	TEST-3	PASS
4	TEST-4	PASS
5	TEST-5	PASS
6	TEST-6	PASS
7	TEST-7	PASS
8	TEST-8	PASS
9	TEST-9	PASS
10	TEST-10	PASS
11	TEST-11	PASS

➤ CIAT.display



public git repo:

<https://gerrit.automotivelinux.org/gerrit/gitweb?p=staging/agl-jta-results.git;a=summary>

➤glance – display & compare the result

Project CIAT.display

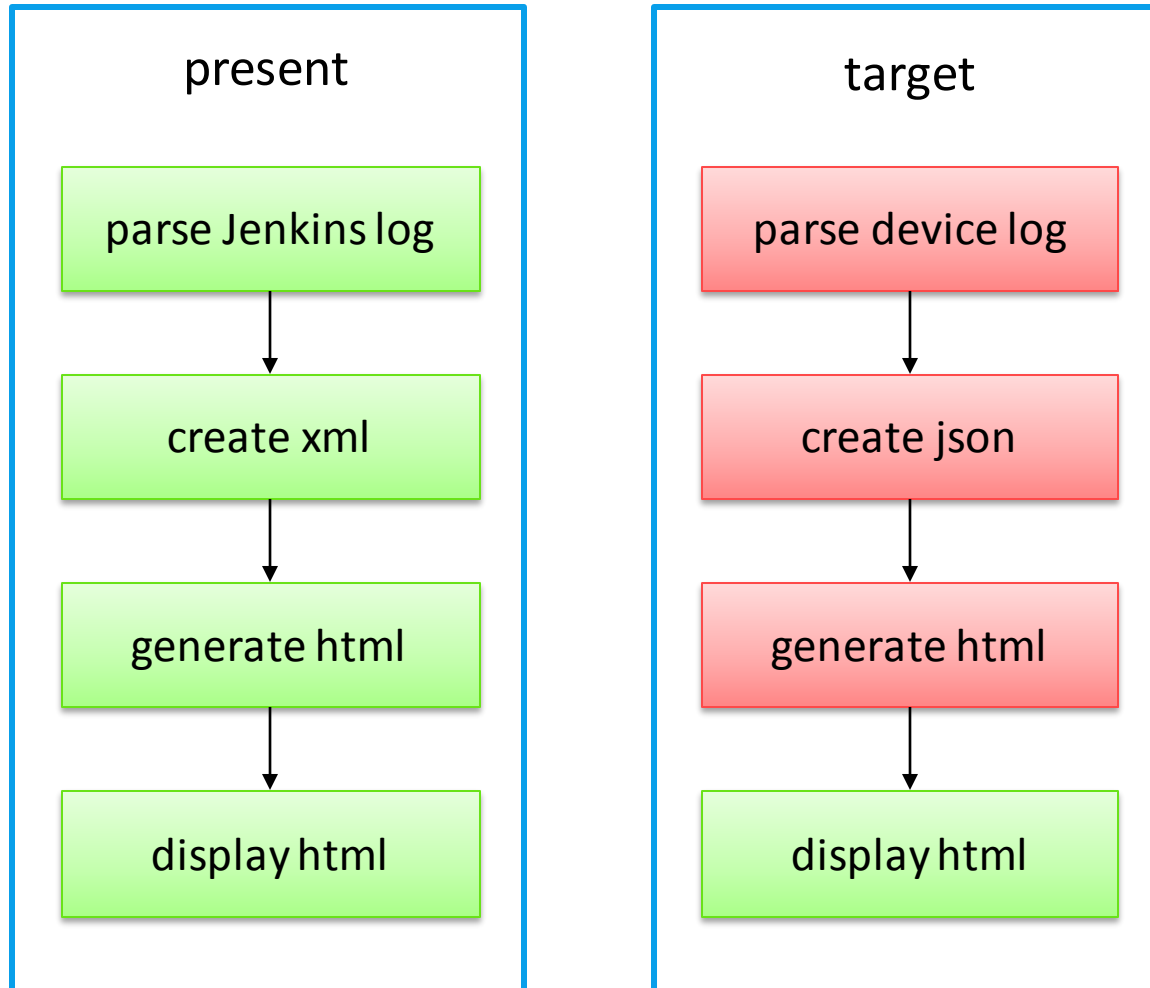
Note: After CIAT.display finishes, please **refresh** and test results will be showed!

Latest Test: 2017-01-24 @ fnst.dragonboard
Latest Total: 1146
Latest Pass: 961
Latest Fail: 5
Latest Untest: 180

No.	Test Name	2017-01-24 @ fnst dragonboard				2017-01-24 @ ften m3skit			
		DATE: 2017-01-24 Start Time: 2017/01/23 09:53:32 (UTC) End Time: 2017/01/23 12:13:56 (UTC) Board Version: Dragonboard Rev 1.0 Test Dir: /home/ /tmp/ Test Device: /dev/sda1 Filesystem for Test Device : ext4				DATE: 2017-01-24 (manifest) Start Time: 2017/01/23 09:52:07 (UTC) End Time: 2017/01/23 12:14:08 (UTC) Board Version: m3skit Rev 1.0 Test Dir: /home/root Test Device: /dev/sda1 Filesystem for Test Device : ext4			
		total	pass	fail	untest	total	pass	fail	untest
1	Functional.LTP.Filesystem (detail)	24	24	0	0	24	24	0	0
2	Functional.LTP.Syscalls (detail)	1112	927	5	180	1112	924	6	182
3	Functional.LTP.Tests (detail)	10	10	0	0	10	10	0	0
SUM	-	1146	961	5	180	1146	958	6	182

Change html display flow

➤ Html display flow



Present:

1. xml may be not the best choice to generate html
2. Jenkins log is always huge
3. some process are redundant

Solution:

1. replace xml with json
2. simplify the process

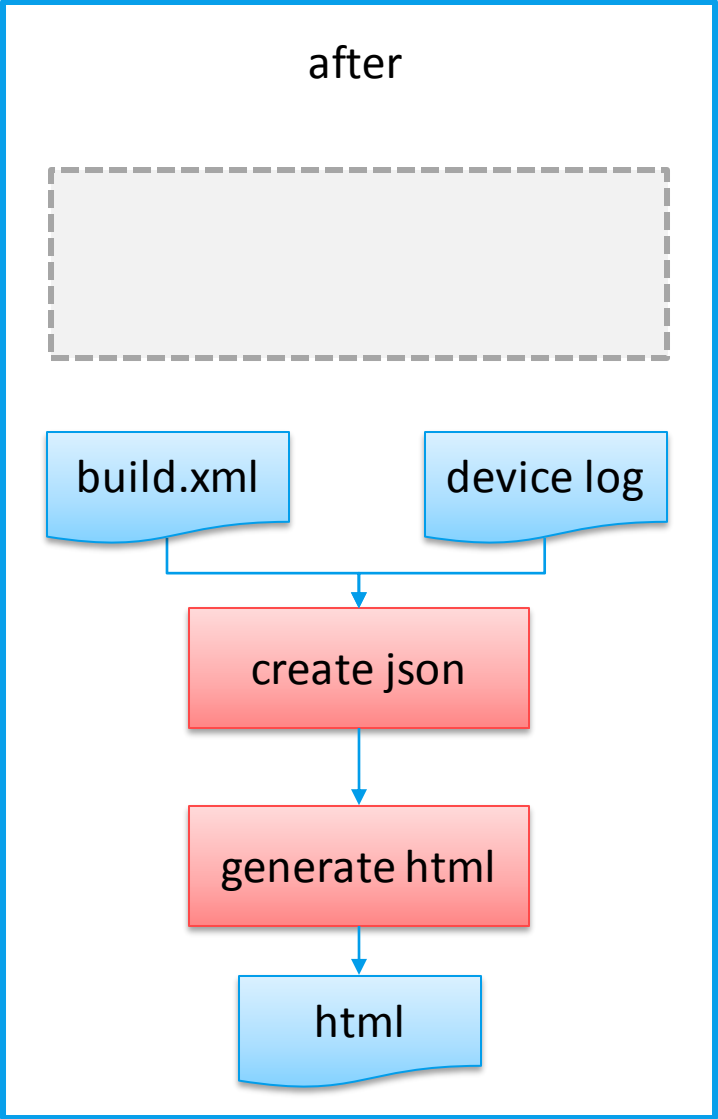
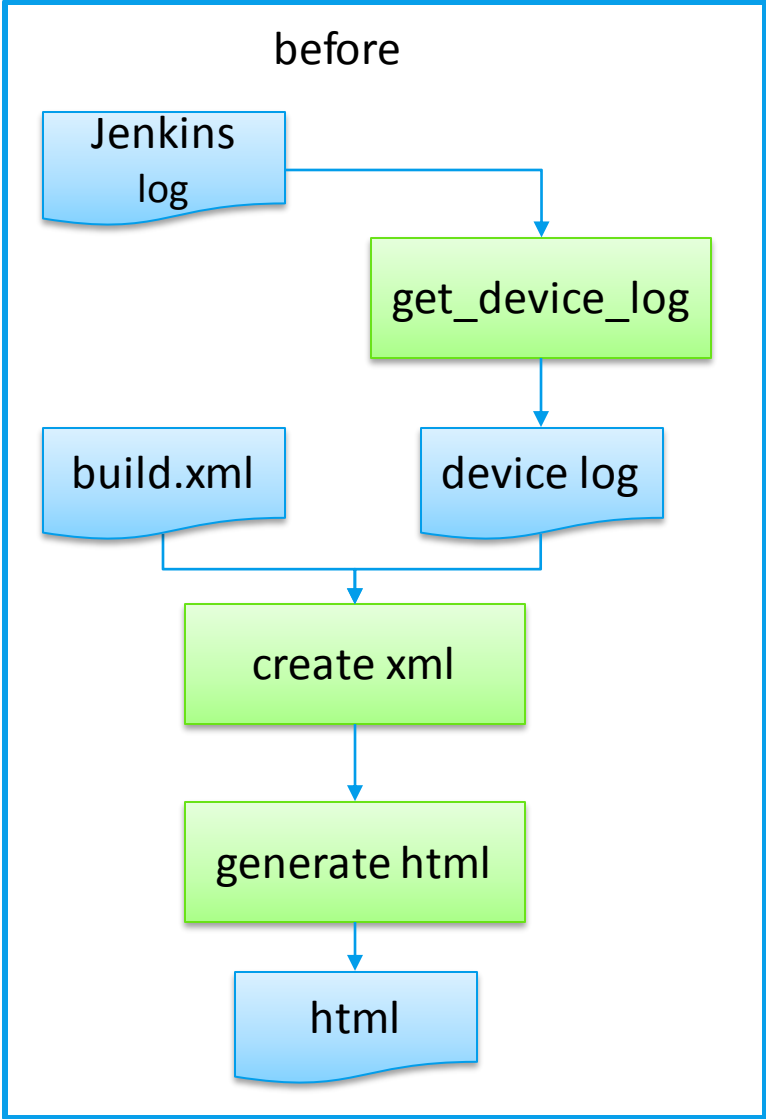
Change html display flow

➤ Why JSON (<http://www.json.org/xml.html>)

- **simplicity**
JSON has a much smaller grammar and maps more directly onto the data
- **human readable**
JSON is much easier for human to read than XML
- **better data exchange format**
JSON is a better data exchange format. XML is a better document exchange format.
- **suited for python**
JSON is better suited for python data structures, such as dict. Jenkins owns many python scripts in backend.
- **compatible for Jenkins**
JSON has been applied to Jenkins for benchmark suit, which is easy for reconstruction.

Change html display flow

➤ Functional test case



Item	comment
build.xml	information about case
Jenkins log	all output in process
device log	output of case
html	final result web page

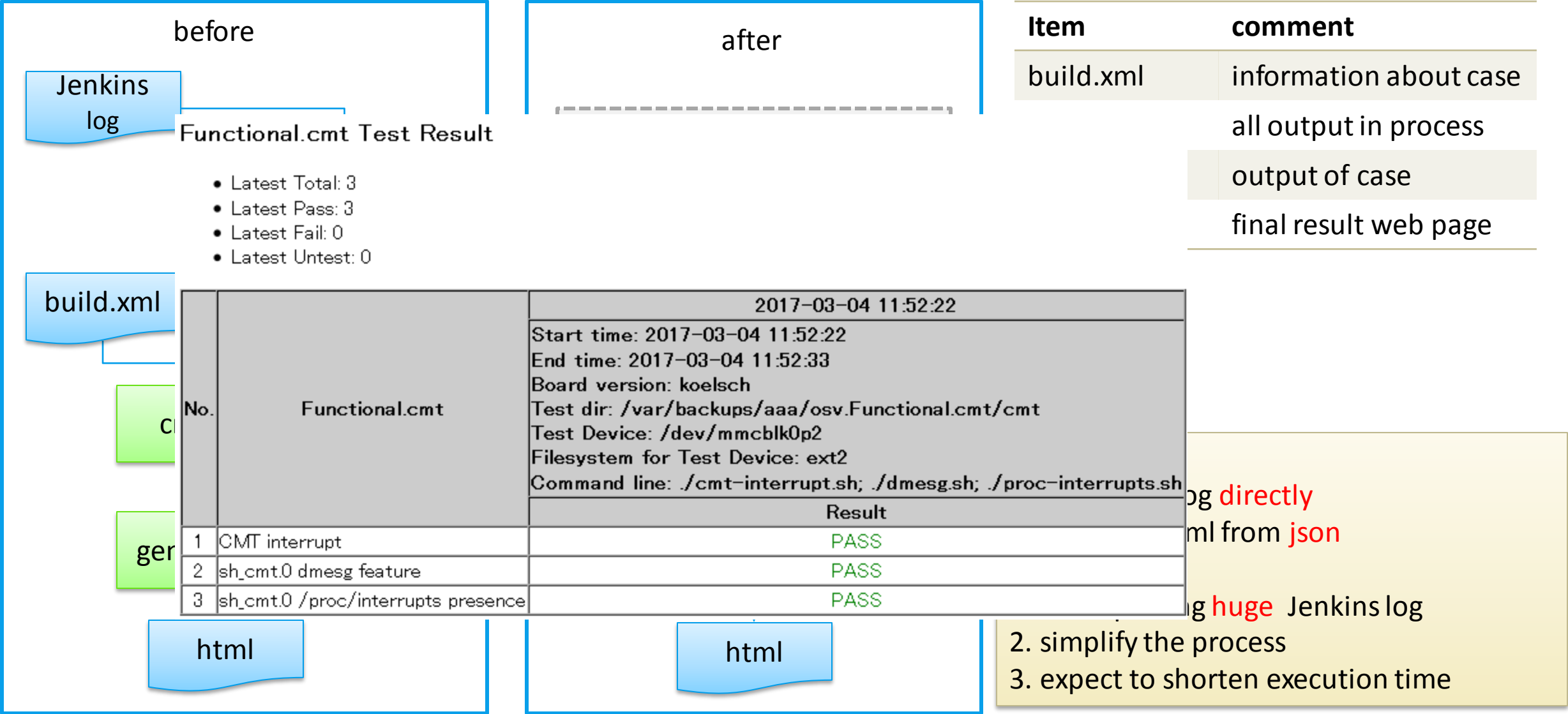
Modification:

- 1. get device log **directly**
- 2. generate html from **json**

Advantage:

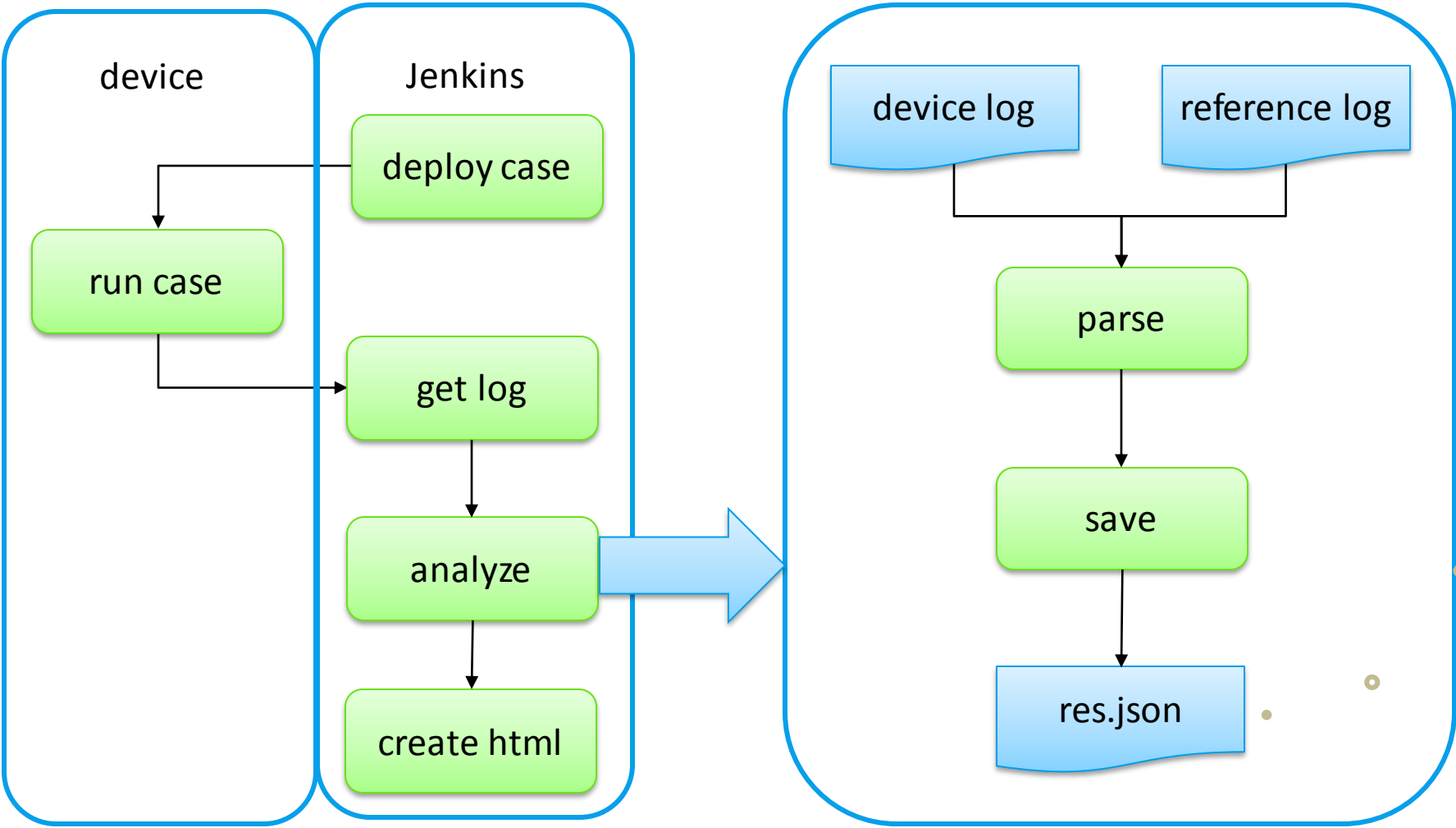
- 1. avoid parsing **huge** Jenkins log
- 2. simplify the process
- 3. expect to shorten execution time

➤ Functional test case



Change html display flow

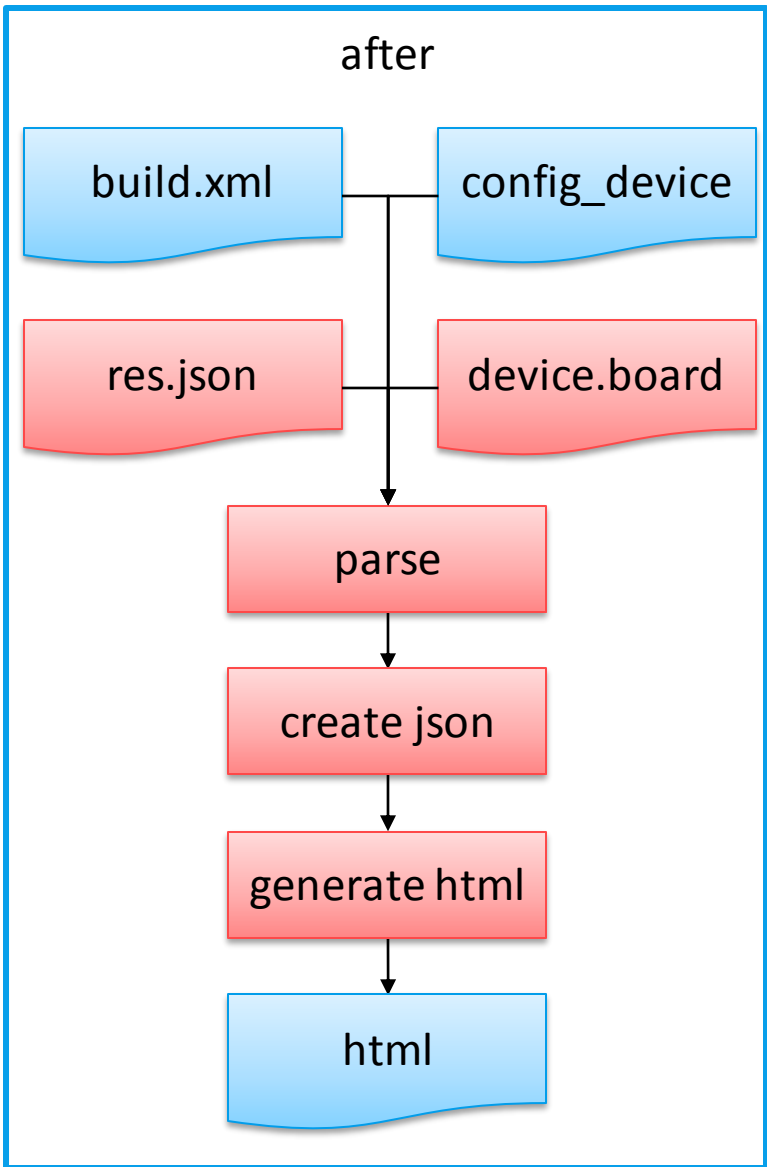
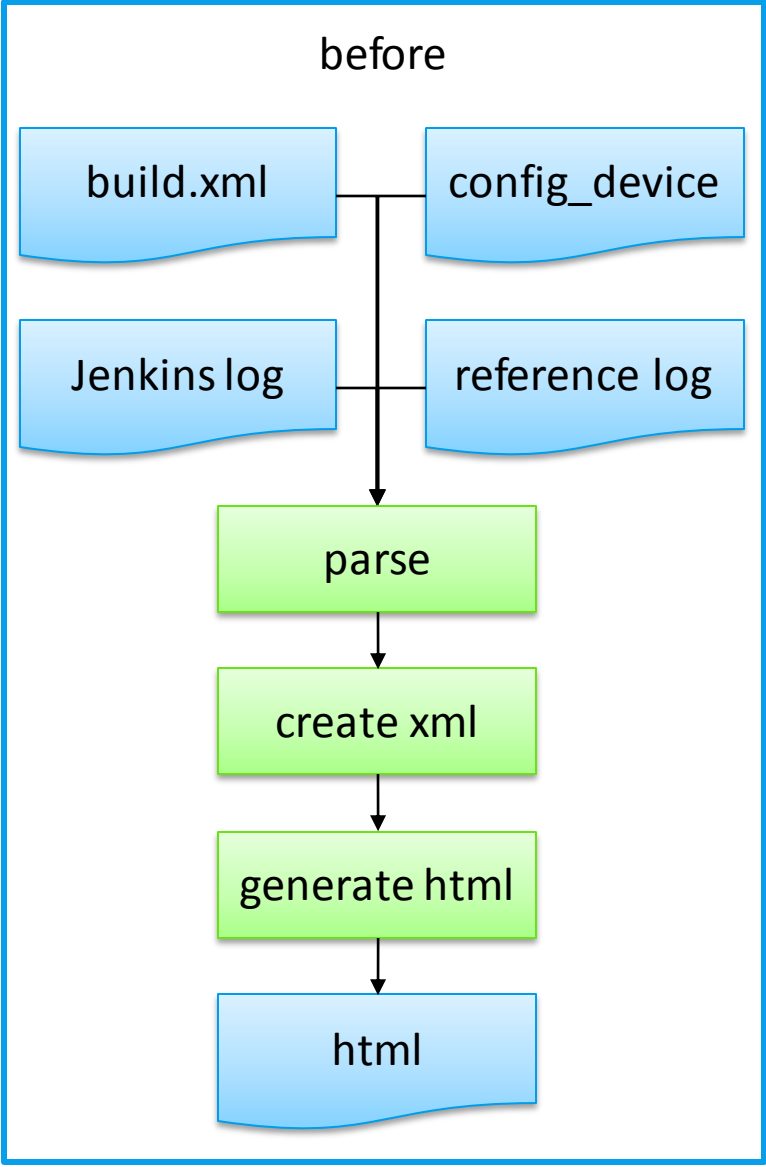
➤ Whole process of benchmark test



item	comment
device log	output of case
reference log	threshold item
res.json	result data

valuable but unused

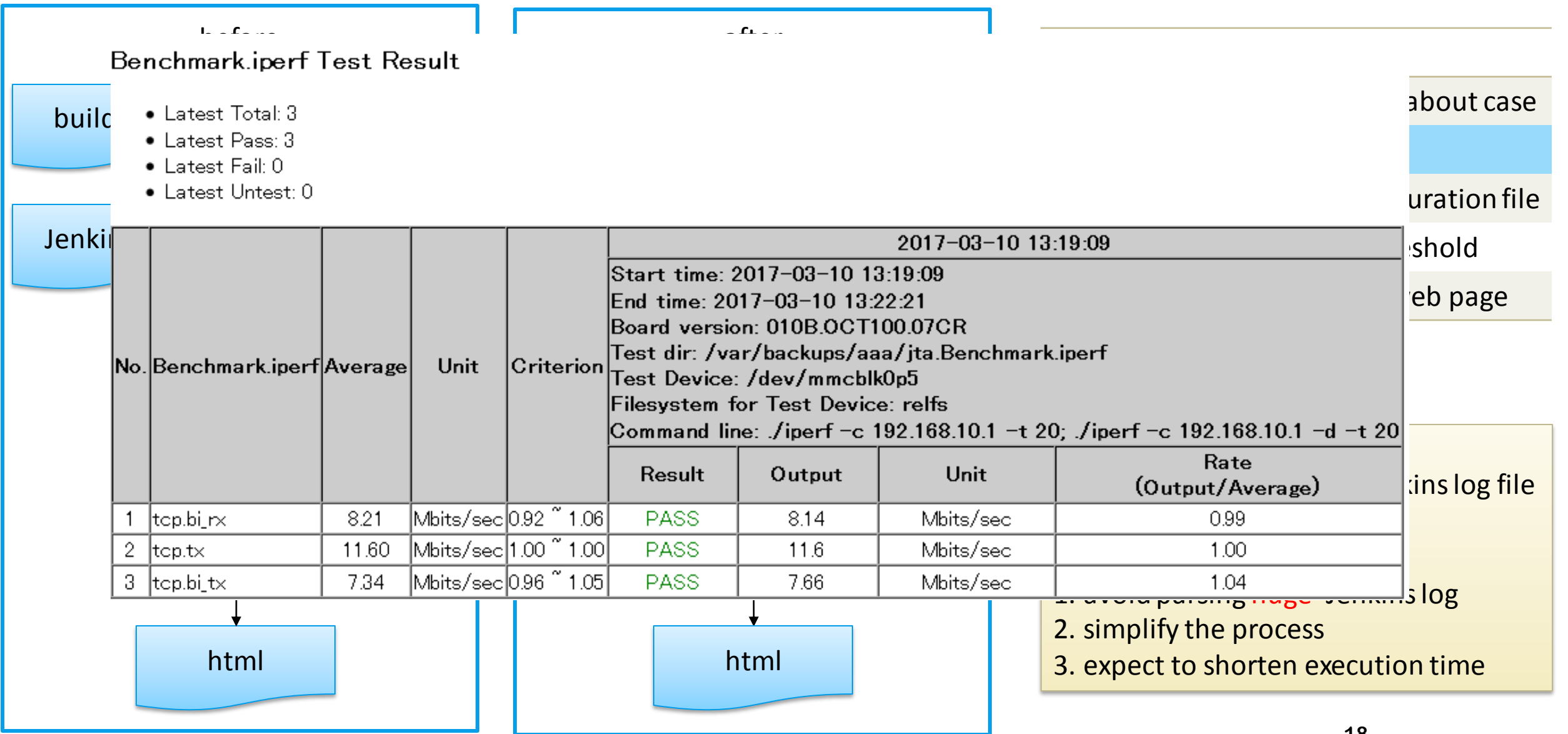
➤ Benchmark test case



Item	Comment
build.xml	information about case
res.json	result data
device.board	board configuration file
config_device	range of threshold
html	final result web page

- Modification:
- 1. **avoid** extra analysis of Jenkins log file
 - 2. generate html from **json**
- Advantage:
- 1. avoid parsing **huge** Jenkins log
 - 2. simplify the process
 - 3. expect to shorten execution time

➤ Benchmark test case



- LTP test suit
 - Current
 - solve the FAIL items in LTP cases
 - pass LTP cases on R-car M3 and dragon board
 - share results to AGL community
 - future work
 - feed back the change to the AGL community
 - solve other items on R-car M3 and dragon board
- cooperate with fuego
- participate in improving AGL-Fuego and AGL's CIAT

Thank you!

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